

In the Specification:

On page 1, after the title insert the following:

RELATED APPLICATIONS

This is a U.S. national stage of application No. PCT/DE2004/002384, filed on 26 October 2004.

This patent application claims the priority of German patent application nos. 103 56 283.4 and 10 2004 005269.7 filed November 28, 2003 and February 3, 2004 respectively, the disclosure content of which is hereby incorporated by reference.

FIELD OF THE INVENTION

On page 1, amend the paragraph beginning on line 6 as follows:

The invention relates to a light-emitting semiconductor component ~~as claimed in the preamble of claim 1.~~ wherein the area of the p-doped semiconductor layers is provided in the protective-diode section on the side facing away from the first pn junction with an n-doped semiconductor layer which forms a second pn junction with the area of p-doped semiconductor layers in the protective-diode section and is electrically conductively connected to the area of p-doped semiconductor layers in the light-emitting section, and wherein the first pn junction has a larger area in the protective-diode section than in the light-emitting section.

On page 1, delete the paragraph beginning on line 9 through line 12 in its entirety.

On page 1, before line 14, insert the following heading:

BACKGROUND OF THE INVENTION

On page 2, before line 12, insert the following heading:

SUMMARY OF THE INVENTION

On page 2, amend the paragraph beginning on line 12 as follows:

~~The invention is based on the object of specifying~~ One object of the present invention is to provide a light-emitting semiconductor component which is distinguished by an improved protection against ESD voltage pulses in the reverse direction of the light-emitting pn junction and can be produced with relatively little expenditure.

On page 2, delete the paragraph beginning on line 19 through line 23 in its entirety.

On page 2, amend the paragraph beginning on line 25 through page 3, line 5 as follows:

According to the invention, a light-emitting semiconductor component contains a monolithically produced sequence of semiconductor layers, wherein an area of n-doped semiconductor layers and an area of p-doped semiconductor layers follow one another and a first pn junction is formed between the areas, the first pn junction being subdivided into a light-emitting section and a protective-diode section by an insulating section. The insulating section electrically insulates the light-emitting section and the protective-diode section from one another in the area of the p-doped semiconductor layers wherein the area of the p-doped semiconductor

layers is provided in the protective-diode section on the side facing away from the first pn junction with an n-doped semiconductor layer which forms a second pn junction with the area of p-doped semiconductor layers in the protective-diode section and is electrically conductively connected to the area of p-doped semiconductor layers in the light-emitting section, and wherein the first pn junction has a larger area in the protective-diode section than in the light-emitting section. ~~In the area of the protective diode section, an n-doped layer is applied to the area of the p-doped semiconductor layers which is electrically conductively connected to the area of the p-doped semiconductor layers of the light emitting section and forms a second pn junction with the p-doped area of the protective diode section. The protective diode section has a larger area than the light emitting section.~~

On page 6, delete the paragraph beginning on line 7 through line 9 in its entirety.

On page 6, before line 11, insert the following heading:

BRIEF DESCRIPTION OF THE DRAWINGS

On page 6, before line 18, insert the following heading:

DETAILED DESCRIPTION OF THE DRAWINGS

On page 7, amend the paragraph beginning on line 38 through page 8, line 20 as follows:

The insulating section 6 is constructed, for example, as a trench 19 which extends from the surface of the semiconductor layers 2 into the area of the n-doped semiconductor layers 3. The p-doped areas 4 of the light-emitting section 7 and of the protective-diode section 8 are separated from one another and electrically insulated by the trench 19. The area of n-doped semiconductor layers 3, in contrast, is only partially interrupted by the trench 19, or it is not interrupted at all ~~at least not completely~~, so that the light-emitting section 7 and the protective-diode section 8 are electrically connected to one another in this area. The trench 19 forming the insulating section 6 can be produced, for example, by an etching process or mechanical machining. On its inside, the trench 19 is advantageously provided with an insulating layer 16. This ensures that when the second contact metallization 12 is applied, no short circuit occurs between the light-emitting section 7 and the protective-diode section 8. Before the insulating layer 16 is applied, the current apertures 14 can be produced from the inside of the trench 19 by an oxidation process.